

WHAT IS CLAIMED IS:

1. A monoclonal antibody of class IgG produced by a hybridoma formed by fusion of spleen cells from a mouse previously immunized with human T cells and cells from a mouse myeloma line, which antibody:

- a) reacts with essentially all normal human peripheral T cells and cutaneous T lymphoma cells, but not with normal human peripheral B cells, null cells or macrophages;
- b) reacts with from about 5% to about 10% of normal human thymocytes;
- c) reacts with leukemic cells from humans with T cell chronic lymphoblastic leukemia but does not react with leukemic cells from humans with T cell acute lymphoblastic leukemia, null cell acute lymphoblastic leukemia, or B cell chronic lymphatic leukemia;
- d) reacts weakly with the human T cell line HJD-1 but does not react with CEM, Laz 191, or HML;
- e) does not react with the Epstein-Barr virus-transformed human B cell lines Laz 007, Laz 156, Laz 256, or SB; and
- f) fixes complement.

2. The monoclonal antibody of Claim 1 which is of subclass IgG<sub>2</sub>.

3. The monoclonal antibody of Claim 1 which is produced from a hybridoma formed by fusion of P3X63Ag8U1 myeloma cells and spleen cells from a CAF<sub>1</sub> mouse previously immunized with E rosette purified human T cells.

4. Monoclonal antibody which is produced from a hybridoma having the identifying characteristics of Expts. 1-5.  
ATCC NO. CRL 8001

5. A therapeutic composition of matter comprising, in admixture with a pharmaceutically acceptable carrier, a therapeutically-effective amount of the antibody of Claim 1, said amount being effective to reduce or eliminate the rejection of a transplant by an organ transplant recipient.
6. A therapeutic composition of matter comprising, in admixture with a pharmaceutically acceptable carrier, a therapeutically-effective amount of the antibody of Claim 4, said amount being effective to reduce or eliminate the rejection of a transplant by an organ transplant recipient.
7. An IgG monoclonal-antibody-producing hybridoma formed by fusion of spleen cells from a mouse previously immunized with human T cells and cells from a mouse myeloma line, which antibody:
- reacts with essentially all normal human peripheral T cells and cutaneous T lymphoma cells, but not with normal human peripheral B cells, null cells or macrophages;
  - reacts with from about 5% to about 10% of normal human thymocytes;
  - reacts with leukemic cells from humans with T cell chronic lymphoblastic leukemia but does not react with leukemic cells from humans with T cell acute lymphoblastic leukemia, null cell acute lymphoblastic leukemia, or B cell chronic lymphatic leukemia;
  - reacts weakly with the human T cell line HJD-1 but does not react with CEM, Laz 191, or HML;
  - does not react with the Epstein-Barr virus-transformed human B cell lines Laz 007, Laz 156, Laz 256, or SB; and
  - fixes complement.

8. The hybridoma of Claim 7 wherein the antibody produced thereby is of subclass IgG<sub>2</sub>.

9. The hybridoma of Claim 7 which is formed by fusion of P3X63Ag8U1 myeloma cells and spleen cells from a CAF<sub>1</sub> mouse previously immunized with E rosette purified human T cells.

a 10. A hybridoma having the identifying characteristics of ~~ATCC~~ NO. CRL 8001

11. A method of treatment of an organ transplant recipient to reduce or eliminate allograft rejection of said transplanted organ which comprises administration of an amount of monoclonal antibody effective to cause said reduction or elimination, which antibody:

- a) reacts with essentially all normal human peripheral T cells and cutaneous T lymphoma cells, but not with normal human peripheral B cells, null cells or macrophages;
  - b) reacts with from about 5% to about 10% of normal human thymocytes;
  - c) reacts with leukemic cells from humans with T cell chronic lymphoblastic leukemia but does not react with leukemic cells from humans with T cell acute lymphoblastic leukemia, null cell acute lymphoblastic leukemia, or B cell chronic lymphatic leukemia;
  - d) reacts weakly with the human T cell line HJD-1 but does not react with CEM, Laz 191, or HML;
  - e) does not react with the Epstein-Barr virus-transformed human B cell lines Laz 007, Laz 156, Laz 256, or SB; and
  - f) fixes complement.
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a 12. The method of Claim 11 wherein the antibody is produced from a hybridoma having the identifying characteristics of OKT3. ATCC No. CRL 8001

- 5 13. A method for determining in an individual the proportion of circulating lymphocytes that are T cells which comprises mixing the antibody of Claim 1 with a circulating lymphocyte composition from said individual and determining the proportion of the circulating lymphocytes which react with said antibody, and are  
10 thus T cells. B

14. A method for determining in an individual the proportion of circulating lymphocytes that are T cells  
15 which comprises mixing antibody produced from a hybridoma having the identifying characteristics of OKT3 with a circulating lymphocyte composition from said individual and determining the proportion of the circulating lymphocytes which react with said antibody,  
20 and are thus T cells.
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15. A method for preparing monoclonal antibody which:

- a) reacts with essentially all normal human peripheral T cells and cutaneous T lymphoma cells, but not with normal human peripheral B cells, null cells or macrophages;
- b) reacts with from about 5% to about 10% of normal human thymocytes;
- c) reacts with leukemic cells from humans with T cell chronic lymphoblastic leukemia but does not react with leukemic cells from humans with T cell acute lymphoblastic leukemia, null cell acute lymphoblastic leukemia, or B cell chronic lymphatic leukemia;
- d) reacts weakly with the human T cell line HJD-1 but does not react with CEM, Laz 191, or HML;
- e) does not react with the Epstein-Barr virus-transformed human B cell lines Laz 007, Laz 156, Laz 256, or SB; and
- f) fixes complement,

which comprises the steps of:

- i) immunizing mice with E rosette positive purified human T cells;
- ii) removing the spleens from said mice and making a suspension of spleen cells;
- iii) fusing said spleen cells with mouse myeloma cells in the presence of a fusion promoter;
- iv) diluting and culturing the fused cells in separate wells in a medium which will not support the unfused myeloma cells;
- v) evaluating the supernatant in each well containing a hybridoma for the presence of the desired antibody;

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- vi) selecting and cloning hybridomas producing the desired antibody; and
- vii) recovering the antibody from the supernatant above said clones.

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16. The method of Claim 15 wherein said mice are of strain CAF<sub>1</sub> and said myeloma cells are P3X63Ag8U1.

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- 10 17. A method for preparing monoclonal antibody which:
- a) reacts with essentially all normal human peripheral T cells and cutaneous T lymphoma cells, but not with normal human peripheral B cells, null cells or macrophages;
  - 15 b) reacts with from about 5% to about 10% of normal human thymocytes;
  - c) reacts with leukemic cells from humans with T cell chronic lymphoblastic leukemia but does not react with leukemic cells from humans with T cell acute lymphoblastic leukemia, null cell acute lymphoblastic leukemia, or B cell chronic lymphatic leukemia;
  - 20 d) reacts weakly with the human T cell line HJD-1 but does not react with CEM, Laz 191, or Hm1;
  - 25 e) does not react with the Epstein-Barr virus-transformed human B cell lines Laz 007, Laz 156, Laz 256, or SB; and
  - 30 f) fixes complement,

which comprises the steps of:

- i) immunizing mice with E rosette positive purified human T cells;
  - 35 ii) removing the spleens from said mice and making a suspension of the spleen cells;
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- iii) fusing said spleen cells with mouse myeloma cells in the presence of a fusion promoter;
- iv) diluting and culturing the fused cells in separate wells in a medium which will not support the unfused myeloma cells;
- v) evaluating the supernatant in each well containing a hybridoma for the presence of the desired antibody;
- vi) selecting and cloning hybridomas producing the desired antibody;
- vii) recovering the antibody from the supernatant above said clones;
- viii) transferring said clones intraperitoneally into mice; and
- ix) harvesting the malignant ascites or serum from said mice.

18. The method of Claim 17 wherein said mice are of strain CAF<sub>1</sub> and said myeloma cells are P3X63Ag8U1.

19. A method of confirming the presence of cutaneous T cell lymphoma in an individual which comprises mixing a lymphoma T cell composition from said individual with an amount of the antibody of Claim 1 effective to cause a reaction between any cutaneous T lymphoma cells and said antibody.

20. A method of treatment of cutaneous T cell lymphoma in an individual in need of such treatment which comprises administering to said individual an amount of the antibody of Claim 1 effective to reduce the amount of T lymphoma cells in said individual and thus ameliorate the disease.

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21. A method of treatment of T cell chronic lympho-  
blastic leukemia in an individual in need of such  
treatment which comprises administering to said  
individual an amount of the antibody of Claim 1  
5 effective to reduce the amount of T leukemia cells  
in said individual and thus ameliorate the disease.

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